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Printed in Japan

ISBN 92-808-0137-6
ISSN 0379-5764

HSDRGPID-26/UNUP-137

**NEGATIVE AND POSITIVE SIDES OF NORWEGIAN
LIFE STYLE: AN EMPIRICAL ASSESSMENT
OF OVERDEVELOPMENT**

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This paper by Dag Poleszynski was presented at the first meeting of the Alternative Ways of Life sub-project of the GPID Project, Cartigny, 21-24 April 1978.

Geneva, January 1980

Johan Galtung

It is being circulated in a pre-publication form to elicit comments from readers and generate dialogue on the subject at this stage of the research.

I. INTRODUCTION

This paper tries to present a view of the dominant life style of people in Norway, a country which many people in other parts of the world have held as some kind of "ideal" in realizing central developmental goals. However, from the point of view of this paper, Norway does not stand out as an "ideal" - although she in comparison with many other industrialized nations admittedly has succeeded reasonably well in securing the average citizen a high level of material welfare, a well-developed social security system, and not too large a distance between the elite and the people-at-large. As we shall see, infant mortality rates are among the lowest in the world, living ages among the highest, crime rates are still relatively low, and Norwegians are known to be living healthy, well-exercised lives surrounded by the serene beauty of Norwegian nature. But things are changing also in provincial Norway as she is approaching the post-industrial age. Are we indeed about to become an overdeveloped people, a country of too much for our own good, and, in spite of our non-colonial past, a country which functions exploitative of the poor masses of this world ?

II. A BRIEF ENCOUNTER WITH A "STATISTICAL NORWEGIAN"

Norwegians enter this world with a good chance of surviving: Infant mortality rates are among the lowest in the world, with deaths per 1000 live burths now being around 10. A baby boy may expect to live for $71\frac{1}{2}$ years, a baby girl for almost 78 years. Although times may change, prospects are that the high material consumption of today's generation will continue well into the future. Norway is a resource-rich country, being able to use her ample resources of hydro-power and petroleum to import what she may not have. Per capita calory consumption is below 3000 per day - however, the primary calories needed to secure a milk- and meat-rich diet surpass 10.000 kcal - or some 4 times more than the daily need. Because of the relative scarcity of agricultural land, considering the present consumption patterns, about 20% of the Norwegian grain areas (1.7 mill. decares) are used in other countries in order to secure Norwegian consumption of tobacco, coffee, tea, beer, wine, liquor and cocoa. In addition, enough sugar, protein fodder etc. are imported so that Norwegian self-sufficiency in foodstuffs on a caloric basis hardly surpasses 35%. The per capita yearly consumption of sugar is above 40 kilos, of meat about 42 kilos, of milk 185, cheese almost 10, and butter and margarine consumption lies around 25 kilos. Norwegians are big on fish and consume close to 40 kgs per capita per year.

Most Norwegians enter school at the age of 7, some of whom having spent 1 year in kindergarten or in a nursery home. After 12 years of schooling they either join the 12-month mandatory military service (men only), go to work (at home or outside of the home) - or register as unemployed. Unemployment in Norway has traditionally been low, seldom above 1% except for the last few years. Work conditions are closely regulated - 40 hour week, 4 weeks of paid vacation, retirement at 67 in most trades.

Norwegian life style is energy-intensive. In spite of a well-developed public transportation system, the percentage share of automobiles in total urban passenger travel is as high as 72 in 1975. With automobility

on the rise, this figure may now be even higher. Record sales of automobiles during the last few years have brought the number of inhabitants per private car down to less than 4. Due to the emphasis on power-demanding industries, per capita energy use is as high as $7\frac{1}{2}$ tons of oil equivalent, and electric power production per inhabitant is far superior to any other nation in the world, now approaching 20 000 KWh.

Life styles in Norway may be good or bad - and as Norwegians usually compare themselves to other developed countries, we feel that we are doing fairly well. But statistics may reveal some discomfoting trends. Let us look at some of them below.

III. TRENDS AND STATISTICS ON NORWEGIAN LIFE STYLE

In the presentation below we shall in the main follow the list of needs-categories put forward by Galtung/Wemegah. Consonant with this, we start out with SECURITY needs. If security needs are related to the needs for avoiding physical pain by assault or accident, we may look at the trends in Norway of violent deaths as recorded by the Central Bureau of Statistics. In Table 1 below we have shown the development of violent deaths by accident.

Table 1: Violent deaths - accidents

Year	Number of deaths per year	Deaths per million population*
1876-1885	915	477
1886-1890	862	438
1891-1895	1 216	597
1896-1900	1 199	552
1901-1905	1 168	511
1906-1910	1 108	472
1911-1915	1 143	467
1916-1920	1 151	447
1921-1925	1 041	384
1926-1930	1 109	398
1931-1935	1 001	350
1936-1940	1 622	551
1941-1945	2 945	968
1946-1950	1 477	459
1951-1955	1 515	448
1956-1960	1 619	458
1961-1965	1 792	487
1966-1970	1 909	497
1971-1975	2 022	509
1975	2 034	
1976	1 917	

* Number of deaths divided by million population in the median year of the period

Source: Historical Statistics 1968 and Statistical Yearbook for subsequent periods

The statistics show no clear trend during the total period. However, deaths per million population declined to a low point in 1931-35 and rose dramatically during WW2. After 1951, the figures have risen steadily. We have looked at all accidents combined, to see whether or not there was any trend in physical security. The assumption is that if you die from accident, it is the probability of dying that counts, not the way in which you die. Disaggregate figures on accidents show a dramatic decrease in accidents during fishing and water transport and from drowning. However, after 1911 accidents by motor vehicles started and have risen dramatically until recently, while accidents in aviation started after 1921, but only rising moderately after this.

Another violent form of death is caused by homicide. Table 2 below gives the long-term data for Norway in this respect.

Table 2: Violent deaths - homicides

<u>Year</u>	<u>Number per year</u>	<u>Per million population</u>
1876-1885	17	8,9
1886-1890	18	9,1
1891-1895	18	8,8
1896-1900	21	9,7
1901-1905	20	8,7
1906-1910	19	8,1
1911-1915	23	9,4
1916-1920	17	6,6
1921-1925	20	7,4
1926-1930	25	9,0
1931-1935	22	7,7
1936-1940	14	5,1
1941-1945	313	103,0
1946-1950	14	4,3
1951-1955	11	3,3
1956-1960	17	4,8
1961-1965	19	5,2
1966-1970	22	5,7
1971-1975	27	6,8
1975	28	7,0
1976	30	7,5

Source: As for Table 1 and Statistical Yearbooks 1977 & 1978

As for Table 1, we find no definite trends in the figures presented. The homicide rate stayed at the same level from 1876 to 1930. Then it dipped during the economic depression of the 30s, rose dramatically during WW2 and reached a low point in 1951-55. After this, however, the figures have shown a steady increase. But even if the murder rate is going up, we have still not reached the somewhat higher level we experienced before 1931. We have not been able to ascertain whether there has been any change in the type of murder committed, but our general hypothesis would be that during the last few decades, homicide of people not knowing each other has increased, while family/friends/neighbour-type of homicides have decreased (alpha-murders up, beta-murders down). This hypothesis remains to be tested.

Other threats to our sense of security may be such things as the occurrence of offences of violence against people. Statistics on this phenomenon are more scarce, but the Table below shows the development during the last two decades.

Table 3: Offences of violence against the person

Year	Number of cases:		Year	Number of cases:	
	Per year	Per mill. population		Per year	Per mill.
1956	1 666	482	1966	2 231	594
1957	1 928	552	1967	2 244	593
1958	1 972	560	1968	2 295	601
1959	1 942	547	1969	2 809	729
1960	1 878	524	1970	3 137	809
1961	1 983	549	1971	3 160	810
1962	1 936	532	1972	3 291	837
1963	1 978	540	1973	3 381	854
1964	1 974	534	1974	3 658	918
1965	2 009	540	1975	3 588	895
			1976	3 624	900

Sources: Historical Statistics 1968 and subsequent Statistical Yearbook, published each fall + Statistical Yearbook 1978

To the extent that these statistics are reliable, they show a marked stability in frequency of offences during the first decade shown, while the last decade has developed rather unfavorably. Altogether, the rate of offences has almost doubled from the first to the second decade in question.

Recorded sexual offences during the 1956-75 period are almost completely stable with no increase or decrease in the frequency. These statistics have therefore not been shown in this paper.

The philosophy behind a society's expenditures on the military is to assure against wars. In an overdeveloped society, however, these expenditures often become an end in themselves - a means to further the growth of the military-industrial establishment. The assumption is then that when too many resources are being spent on the military, the security being sought will take away resources for the coverage of other needs - also, in the case of war, the destructive power of a modern defense system may be so large as to destroy the very values it claims to protect. Without pursuing this issue further, we shall briefly look at some data on the development of Norwegian military budgets during the last 100 years. These sums will be related to a very basic Norwegian commodity, the potato.

Table 4: Military expenditures and the potatoes they could buy*

Year	Current (mill.Nkr.) 1000 tons of	
	military budget	potato equivalents
1875	8	100
1880	8	108
1890	10	248
1900	22	403
1910	18	345
1920	60	345
1930	37	517
1939	112	809
1950	353	1 584
1960	1 059	3 530
1970	2 772	4 698
1975	4 608	5 421

* The idea to convert the military budget into potatoes came from Anders Wirak
 Source: Historical Statistics 1968

As approximately 3 kilos of potatoes per day is enough to secure most of the nutritional needs of an average adult, the 1975 budget for defense in Norway could alternatively have been used to keep almost 5 million people alive and healthy. Since, as we know, at least 30-40 million people die of starvation each year and the total Norwegian population only numbers 4 million, the military cannot possibly compete with an equivalent supply of potatoes distributed to the starving masses each year. Even if this is a theoretical example, it underlines the overdeveloped character of Norwegian military systems.

If we look at survival needs in an enlarged perspective, a measure of how developed a society is could be the probability of remaining alive at different ages. The lower the death probability, the more developed we would say that the country was. A leveling out and consequent increase in death probabilities could be interpreted as a sign of overdevelopment, given that the material welfare of the population still was on the rise. Admitting the statistical difficulties of such a measure, we have looked at the trends in death probability by age in Norway during the period 1871-1976, as reported by the Historical Statistics 1968 and the Statistical Yearbooks 1972, 1977 and 1978 (see appendix p.26). The measure relates to all causes of death, not only acts of violence, but also from accidents, diseases, etc. But what we find is the following: For males the death probability becomes smaller throughout the whole period for ages up to 33. The death probability does not decline significantly after the 1951-55 period. For the age group 34-54 the death probability is lowest in the 1956-60 period and slightly higher in 1961-65. For the age group 50-90 the death probability is lowest in the 1950-60 period and slightly higher in 1961-76. The age group 60-90 had the least chances of dying in 1951-55, and the probability figures show a significant increase during both subsequent periods, except for 90 year olds in 1974/75, who had a very low death rate. At the age of 94, we should add, the 1871-1880 period was the best - with probabilities of dying increasing to a peak in 1951-55 for then to decline, but not to the low level we find in the

beginning of the period. Females have lower death probabilities in all periods and for all ages than males. In general, the rates are declining, but the decline has been rather small after 1951-55. For most ages the figures are lowest in 1974-76 with seemingly random exceptions where the lowest figures are found in earlier periods. For the 94 year olds, the 1871-1880 period was most favorable.

The general conclusion from this material is that chance of survival at any age has not become much more likely after the 1950s. Infant mortality rates have declined since then, but adult survival rates have basically stopped improving although survival rates for females are still improving marginally. People who are above 50 may expect about the same (women) or higher (men) probability of dying as they could expect several decades ago, and those who are really old today, are in a lesser shape than the old ones 100 years ago.

But let us now turn to the next group of basic human needs - the WELFARE needs. It is quite clear that the level of material welfare has been increasing in Norway during the last century, but also that certain costs are involved. The material gains have to a large extent been based on an increase in the availability of energy. For most industrialized countries the increase in energy use has taken place outside of the primary production/consumption unit - the family or the household. It is the changes in infrastructure with the parallel industrialization and increase in international trade which has caused energy to rise, but also the development of chemical/mechanical agriculture. For this development to take place, it has been necessary to substitute renewable forms of energy like wood with coal, and then with oil and gas together with hydro-power. Today, most industrialized countries are embarking on a substantial nuclear energy program to continue the electrification of the economy.

For Norway, however, the path has been somewhat different, due to our ample hydro-electric power resources, the development of which may be illustrated in Table 5 below.

Table 5: Electricity consumption, measured at the consumer's level in Norway 1930-1976

Year	GWh	5-year increase	10-year increase
1930	7 630		
1935	7 838	2,7%	
1940	8 380	6,9%	
1946	9 908	20,7% *	9,8%
1950	14 817	57,1% **	24,1% (1936-46)
1955	19 715	33,1%	76,8%
1960	27 509	39,5%	102,6% (1946-56)
1965	42 009	52,7%	85,7%
1970	51 512	22,6%	113,1%
1975	65 100	26,4%	87,3%
1976	67 500	22,9%	55,0%
1977	65 300	14,8%	56,9% (1966-76)
			42,6%

Sources: Historical Statistics 1968, Statistical Yearbook, 1972, and The Norwegian Hydro and Electricity Board.

* 1941-46 ; ** 1946-51

Parallel with the increased use of electric power there also has been a large increase in the use of non-renewable fossil fuels. Around 1900 the total energy available in Norway has been estimated at 2 million tons of oil equivalent (toe). Today, the total inland use has been estimated at 20,7 mtoe, while our commercial fleet uses more than 10 mtoe, down from a "normal" use of 13-14 mtoe because of the depressed shippingfreightmarket. The question then becomes: how much energy do we need in order to fulfill our basic human welfare needs? Do we have enough energy at our disposal, or do we dispose of more than our legitimate share of energy in this world?

First, as to the question of needs. Admitting that this is hard to answer, we get an indication of what constitutes a sufficiency level of energy use by studying energy availability (commercial energy) in other countries which also have fulfilled the basic welfare needs of their population. Assuming that these needs are met in China, Albania and in Cuba, we find that these countries'inhabitants have at their disposal not more than about 10% of the energy which the

average Norwegian has. It is curious to note that of the total energy which is used to produce the Norwegian GNP, only about 10% is used in private households. And it is within the household unit where most of our needs are being met. It is also interesting to note that most of the industrial employment in Norway is assured with relatively small amounts of energy. In fact, of industrial electricity use power-intensive industries use about 86% of the total, but employs only 14% of the total industrial manpower. Also, energy-intensive industries use about 42% of all heating fuels in use in industry. This means that 86% of the employees only use 14% of the electricity and 58% of the fuel oil.¹

Let us not quantify the costs of producing and using so much energy, let us just mention some of the factors we must consider to get an idea of what the availability of cheap energy means. First, the hydro-electric production. Although this is a renewable source of energy, costs are incurred in terms of lost grazing lands, loss of agricultural lands, local climatic effects, decreased fertility of river banks, reduced capacity of rivers to cope with pollution, and possibly adverse effects on the fisheries both inland and in the ocean. Second, the consequences of burning fossil fuels are well-known: Acidic rains with the consequent bad health effects and negative effects on plant growth, etc., outlet of particles, CO and CO₂ (the latter contributing to the green-house effect), hydrocarbons and nitrous gases. Finally, our reliance on depletable energy sources increases our vulnerability and reduces the energy options for others today and tomorrow.

The reason for having dwelled so much on energy is that it is our ability to convert energy from one form to another which determines how good or bad we live. Therefore, let us not look in detail at all the needs objects we surround ourselves with in order to cover needs. Let us rather consider some data which shed light on the effects on our life style: indicators of health and trends over time. Table 6 below shows the positive development of infant mortality rates during the last half century.

Table 6: Infant mortality rates, 1921-1974

Year ¹	Deaths under 1 year of age per 1000 live births				
	Total	Under 4 weeks ²	4 weeks-11 mo. ³	Legit.	Illegit.
1921-25	51.7	22.1	29.6	49.4	82.8
1926-30	49.5	24.5	25.0	47.2	80.5
1931-35	44.9	22.5	22.4	42.5	76.8
1936-40	39.4	21.3	18.1	37.4	68.8
1941-45	37.3	18.4	18.8	34.5	71.2
1946-50	31.1	16.0	15.0	29.4	63.7
1951-55	22.6	13.1	9.6	21.7	46.9
1956-60	19.9	12.4	7.4	19.2	37.2
1961-65	17.1	12.0	5.1	16.7	26.8
1966-70	13.9	10.3	3.6	13.5	20.3
1971-75	11.6	8.4	3.2	11.0	17.5
1971	12.8	9.6	3.2	12.2	19.6
1972	11.8	8.9	2.9	11.1	18.3
1973	11.9	8.5	3.4	11.4	17.5
1974	10.4	7.4	3.1	9.8	16.6
1975	11.1	7.3	3.8	10.6	15.7
1976	10.5	6.8	3.7	10.0	14.8

1) Annual average for the five-year period 2) Before 1951, under 1 month 3) Before 1951, 1-11 months.

Source: Statistical Yearbook 1976, p.26 and Statistical Yearbook 1978.

It is interesting to note that infant mortality rates have declined continuously from 1921 to 1974. The decline, however, has been much more rapid the last three decades than during the former 2½. After 1970 the decline has more or less stopped, but still shows a positive trend. It is noteworthy that the death rates for babies 4 weeks to 11 months old show a much more marked decline than for babies under 3 weeks. Note also that the relationship between legitimate and illegitimate births' death rates has remained constant over the period with the latter about 2/3 higher than the former.

Table 7: Expectation of life, 1891-1974

Sex & Age	1891-1900	1901-1910	1911-1920	1921-1930	1931-1940	1946-1950	1951-1955	1956-1960	1961-1965	1966-1970
M										
0	50,41	54,82	55,62	60,98	64,08	69,25	71,11	71,32	71,03	71,09
10	51,05	52,92	52,65	56,27	58,56	62,63	63,65	63,50	62,94	62,69
30	37,69	38,85	38,83	40,39	41,48	44,22	44,81	44,57	43,93	43,61
50	23,34	23,95	24,10	24,41	24,90	26,43	26,60	26,21	25,62	25,32
70	10,29	10,59	10,40	10,63	10,71	11,43	11,60	11,38	11,04	10,87
F										
0	54,14	57,70	58,71	63,84	67,55	72,65	74,70	75,57	75,97	76,83
10	54,11	55,08	54,98	58,35	61,25	65,24	66,72	67,30	67,49	68,10
30	39,43	40,24	40,35	42,14	43,55	46,29	47,31	47,74	47,87	48,49
50	24,86	25,30	25,28	25,87	26,35	27,95	28,57	28,84	28,88	29,47
70	10,97	11,24	11,15	11,40	11,38	12,03	12,30	12,36	12,29	12,83

M	1971-75	74-75	75-76	Females	1971-75	74-75	75-76
0	71,41	71,70	71,85	0	77,68	78,01	78,12
10	62,80	62,98	63,05	10	68,71	68,97	69,12
30	43,76	43,95	43,98	30	49,10	49,36	49,53
50	25,41	25,55	25,55	50	30,04	30,29	30,39
70	10,88	10,99	11,00	70	13,19	13,43	13,57

Source: Statistical Yearbooks 1976, 1977 and 1978

If we keep in mind our discussion of death probabilities on page 9, the picture on expectation of life or death at different ages should become complete. As we may see from Table 7, the positive development in infant mortality (Table 6) has a logical parallel in the expectation of life at birth. For males, however, no significant increase in life expectancy has taken place after the 1951-55 period at age 0. For all age groups above 0 males could expect to live longer in 1951-55 than any later period. People who had reached the age of 50 or more in 1891-1900 could expect to live about as long as people the same age today.

For females, the picture is more positive, with increases for all ages and throughout the entire period. Although the increase has slowed down at last two decades, even very old women have "gained" in life expectancy during the last years.

In other words we are facing both positive and negative indicators with

respect to longevity. On the positive side is the increase in life expectancy for the newly born - on the negative side, a stagnation in this development, and for males, an actual decline in expected years of life left at ages over 1. The critical period, again, seems to be the 1950-60 interval. So far, though, we have said nothing about the quality of life, just the quantity of life. We shall return to this later.

First, let us ask: what happens to mothers who give birth? The table below gives a partial answer to this question.

Table 8: Maternal mortality, 1936-1975

Year	Maternal deaths: per 100 000 females per 1000 births at ages 15-49 years	
1936-40	2,35	13,2
1941-45	2,32	15,5
1946-50	1,16	9,2
1951-55	0,74	5,8
1956-60	0,50	4,0
1961-65	0,22	1,7
1966-70	0,18	1,7
1971-75	0,08	0,6

Source: Health Statistics 1975, p.56

Table 8 is self-explanatory: While more than 100 women who gave birth before 1946 each year died giving birth, the number is today down to 4. It is unfortunate that no older data on maternal mortality are available, but our guess would be that the largest decline in maternal deaths, if we had figures from 100 years back, would be in the beginning of the period. It is, however, safe to say that maternal death has not been a very large problem the last few decades, but that a significantly positive development has taken place even after 1950. Today, however, the number cannot get much lower.

Another positive development during the last several decades is the almost total disappearance of many diseases which in the "old days" used to be endemic. Among the more well-known we have experienced the following development:

1) The mortality from tuberculosis has declined drastically since 1896-1900 until today. Before many thousand people died each year from this disease - today, the total number is well below 100. The yearly death rate has developed as follows per 100 000 inhabitants (males/females): 1896-1900 - 299/319, 1921-25 - 159/163, 1946-50 - 56-39, 1965-70 - 4/2 (Source: Historical Statistics 1968). The latest health statistics show a mortality rate for 1974 of 2,2 per 100 000, males and females combined.

2) Leprosy used to be endemic in Norway in the 19th century. In 1856 2858 known cases were reported, in 1875 the number was down to 1752, and in 1890 a further reduction to 960 took place. From then on the decline was rapid - below 500 cases were reported in 1905 (474), below 100 in 1925 (69), and in 1948 only 16 cases were known. Today, leprosy is not even recorded in the statistics. (Statistical Yearbook, 1952)

3) Notified cases of typhoid fever, acute poliomyelitis and diphtheria have also more or less vanished in the 1915-1966 period, according to Historical Statistics. According to dr.med. Anton Jervell², general vaccination against polio started in Norway in 1956, and reported cases are now down to about 2 per year from a widely unpredictable number (almost 1000 cases in 1936) a few decades back. Vaccination against diphtheria was introduced in 1943/44, when as many as 37000 people were infected. Today, we have experienced 15 years without any new reported cases. Whooping cough, a disease traditionally affecting thousands of new cases, mostly children, each year, used to demand about 50 deaths per year. Vaccination against this disease and against many other infectious diseases has cut the death toll down to nil in practice. However, it is hard to tell which factor has contributed the most, improved nutrition and hygiene, better housing and clothing, or medical science. For the purpose of this paper, we need not assign relative merit to these different factors. It is important to note that most of the gains recorded in terms of infectious diseases had occurred before 1960 and that improvements after this time merely have been peripheral.

We have looked at some of the benefits on health of present development patterns. Do we have any indications of costs associated with the last decades' material boom? Below we shall look at the statistics for some of the more common over-development-related diseases: cardiovascular diseases, cancer, tooth decay, obesity and diabetes.

Table 9: Mortality from cardiovascular diseases

Year (averaged)	Deaths per 100 000 population	
	Males	Females
1931-1935	269	288
1936-1940	280	311
1941-1945	236	267
1946-1950	279	316
1951-1955	358	383
1956-1960	432	424
1961-1965	503	459
1966-1970	539	450
1971-1975	554	462
1975	543	451
1976	538	449

Source: NOS Health Statistics and Historical Statistics 1968

* see lecture reproduced in Norsk Medisinaldepot, Yearly Report for 1976, on the 50-year history of medicines as experienced by himself.

As Table 9 indicates, males are more severely affected by overdevelopment than females, the former still continuing the upward trend while the latter seems to have leveled off about 20% higher in 1966-76 than in 1951-55. The very last years, however, show a reversal of recent trends with death rates actually declining for men and women.

The Figure below from New Scientist (6 May 1976) compares the increase in coronary heart disease of the male population with the level of sugar and margarine consumption per person and year in the Norwegian population. As we may see, the development of the four factors in the Figure show a striking similarity, indicating strongly the possibility of heart diseases and nutrition to be related. However, the only direct causality we may be fairly certain of is the relationship between sugar consumption and dental decay.

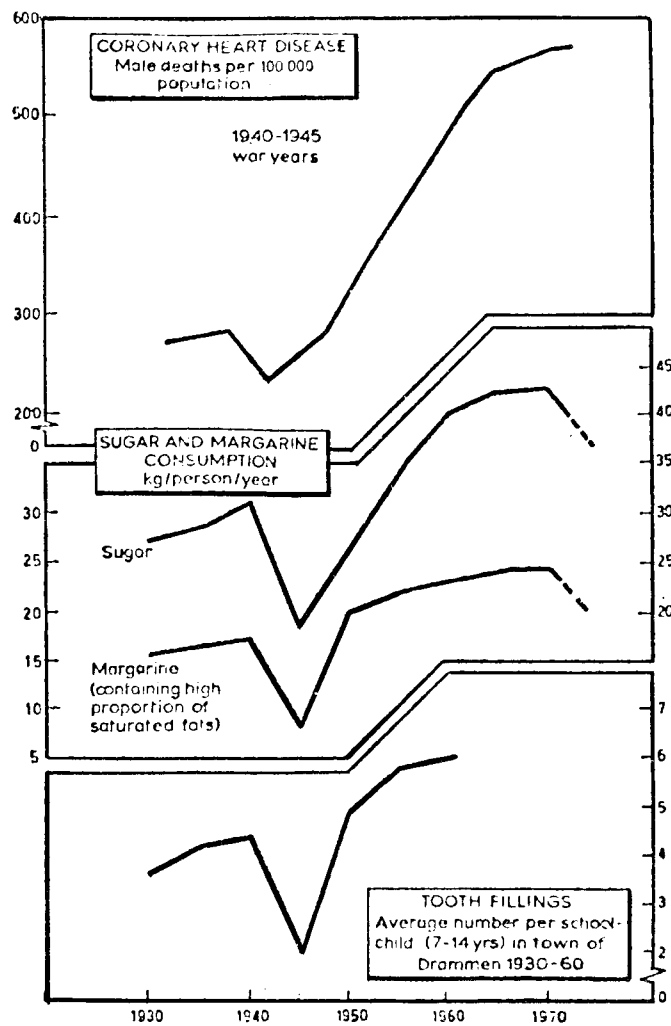


Figure 1. Heart disease, tooth decay, margarine and sugar consumption in Norway since 1930. Downward trend during war years gave first clue to the possible link between diet and heart disease.

As for the cancer statistics, the evidence for a steady increase is rather clear-cut. Table 10 below gives a historical view of the increasing frequency of deaths from malignant neoplasms.

Table 10: Mortality from malignant neoplasms

Year (average)	Deaths per 100 000 population	
	Males	Females
1931-35	128	136
1936-40	135	141
1941-45	133	142
1946-50	147	153
1951-55	157	159
1956-60	166	158
1961-65	179	159
1966-70	193	171
1971-75	204	172

Sources: Historical Statistics 1968 and
NOS Health Statistics 1975

As we may see, the death rate among males has been increasing twice as fast as the death rate among women in the 45-year period studied. Of the 1975 cancer death rate of 215 per 100 000 population for males and 178 for females more than 1/4 of all cases could be attributed to cancer of the stomach, intestines and oesophagus. For males, another 16% of the cases were connected with the wind pipes, the bronchial tubes and the lungs, and another 15% with the prostate glands, while women frequently experienced cancer of the breasts (16,3%) and the sexual organs (9,4%), but only had 4,5% of all cases related to the breathing organs.

It is often said in public debate today that people do not die of cancer, but rather with cancer. This would be true if people in general lived longer than before. However, looking back at Table 7 (page 11), this does not seem to be the case for the period studied in Table 10, at least not for males. Cures for cancer, therefore, do not seem to be able to prevent a further increase in this disease.³ However, statistics on causes of death should be treated with caution, as it sometimes may be hard to determine the cause, especially for older people who are dying of old age regardless of whether they have incurred a disease or not. Apparently, it is true that many diseases that earlier used to cause death, now are kept checked with medicalization. This seems to be the case with

tuberculosis, whooping cough, polio and diabetes, to mention some examples.

Unfortunately, the statistical evidence for chronic diseases such as diabetes, arthritis, asthma or allergic reactions is not well developed. We do know, however, that a number of diseases of this kind, as well as many acute diseases, are related to nutritional factors. According to the West German Ernährungsbericht 1976 (Deutsche Gesellschaft für Ernährung e.V., Frankfurt am Main), estimates are that diseases related to nutritional factors (overnutrition, mostly) costs as much as 17 billion D-Mark, or the equivalent of 2% of total GNP - some three times the UN goal for development aid by the end of the 70s. In Table form, the West German report lists the nutritional-related diseases as follows:

Table 11: Diseases triggered or favored by overweight

Diabetes mellitus - (diabetes)
Gicht - (gout)
Herzinfarkt (KHK) - (myocardial infarction)
Zerebrale Insulte - (stroke, cerebral apoplexie)
Hypertonie - (hypertension)
Hyperlipidämie - (hyperlipemia)
Cholethiasis - (gall stone)
Coxarthrose, Gonarthrose - (arthritis of the hip and knee joints)
Diskopathien - (disc disorders)
Hernien - (hernia)
Varikosis, Thrombophlebitis - (varicose vein, thrombophlebitis)
Erysipel - (erysipel)
Menstruationsanomalien, Sterilität - (menstrual disorders, sterility)
Postoperative Komplikationen - (post operative complications)
Lungenemphysem usw. - (pulmonary emphysema)

Source: Ernährungsbericht 1976, p. 114

While statistics are quite well developed when it comes to causes of death, Norway does not have reliable statistics on chronic diseases. Deaths by diabetes occur with a frequency of approx. 7 per 100 000 population, but the number of people mildly or severely affected by this disease is probably in the order of a few percentage points. According to the West German report, diabetes affected only a few per mille of the German population around 1900 - today at least 3% are

severely affected, while probably as many as 9% are in a lightly affected stage. As usual, different studies give different estimates, but the trend is still quite clear: more and more people are affected by diabetes in Western Germany.

Although comparable figures do not exist for Norway, the differences in average caloric intake (well above 3000 kcal per person and day in W Germany, but slightly under 3000 in Norway) and weight problems (being larger in West Germany than in Scandinavia) should enable us to guess that Norwegian statistics for diabetes rank in the lower end of frequencies reported in the industrialized West (from 2 to 5%, according to Der Spiegel, p.74, No. 44/76). This assumption is supported by a recently published Health Survey 1975 (Central Bureau of Statistics, Oslo), where a total of 11 014 persons answered questions related to their health. Of these, only 7,5 persons per 1000 reported to suffer from diabetes, a figure which should be representative of the Norwegian population. Table 12 below shows the frequency of various chronic diseases in the 1975 survey.

Table 12: Chronic conditions¹⁾ at the beginning of the survey period, by diagnosis. Per 1000 persons, by sex.

Conditions reported	Both sexes	Males	Females
All causes	688,6	630,7	744,8
Nervous conditions	72,8	49,4	95,6
Diseases of nervous system	47,2	39,2	55,0
Diseases of eye and ear	47,6	49,0	46,2
Heart diseases	104,0	87,0	120,4
Diseases of respiratory system	58,0	66,3	49,9
Ulcer, etc.	30,1	39,6	21,0
Other diseases of digestive sys.	21,3	19,5	23,1
Diseases of genito-urinary syst.	32,3	19,7	44,6
Diseases of the skin	59,0	55,5	62,5
Diseases of the musculo-skeletal system	147,6	142,3	152,8
All other diseases and symptoms	49,6	37,0	61,9
Injuries	18,9	26,2	11,8
Number of respondents	11 014	5 427	5 587

1) Not including congenital conditions
Source: Health Survey 1975, p. 122-123

Because some persons suffered from more than one condition, the persons suffering from chronic diseases in the sample was lower than indicated by Table 12. According to the survey, however, as many as 41,3% of the sample population had some kind of chronic disease (not including congenital conditions, which were registered to number 49,6 in 1000 persons). As Table 12 does not have any counterpart from earlier periods, we cannot say much about trends. A similar survey from 1968, however (Health Survey 1968) does give us an indication that people's health may be deteriorating instead of improving. The comparison of the 1968 and the 1975 survey data are reproduced in Table 13 below (from the 1975 survey, page 20).

Table 13: Cases of illness at the beginning of the survey period.

Per 1000 persons, by sex. Health survey 1968 and 1975.

Diagnosis	TOTAL		Males		Females	
	1968	1975	1968	1975	1968	1975
Causes, total	758	804	729	745	785	861
Diseases of the musculo-skeletal system 1)	128	174 ¹⁾	114	169	140	179
Cardiovascular diseases	64	106	57	89	71	122
Nervous conditions	62	78	48	54	75	102
Diseases of the respiratory system	97	76	98	86	96	67
Diseases of skin and subcutaneous tissue	45	62	41	59	48	66
Diseases of the digestive system	60	54	63	62	57	46
Diseases of the nervous system	34	51	30	43	38	58
Diseases of the eye	59	39	50	38	69	40
Diseases of the ear	51	27	57	30	44	23
Diseases of the urinary system	16	23	10	14	20	32
Diseases of the genital organs	8	15	6	10	10	20
All other diseases and conditions	74	72	71	56	79	87
Injuries ²⁾	60	27 ²⁾	84	35	38	19

1) Direct comparable figure with 1968 is 149 per 1000. In 1975 a number of late effects of injuries are registered under the morbid condition reported. 2) See note 1. Direct comparable with 1968 is 60 per 1000 persons.

A comparison of Table 12 and Table 13 shows quite clearly that most of the reported cases of illness are chronic conditions, ie. about 85% of the total. If we assume the same relationship to hold true for the 1968 data, we find a growth rate of slightly below 1% per annum, indicating that if these trends continue, more than half of the population may suffer from chronic diseases by 1985. At present, however, such a forecast is highly speculative, due to varying growth rates for different illnesses (from plus to minus), but also due to the scarcity of data so far presented.

The past pages have been devoted to a discussion of welfare needs, having as their main focus ends (good health) and not means (nutrition, clothing, housing, medicines) by which such ends of welfare measures may be satisfied. We shall now briefly examine the IDENTITY needs. Here we will assume that the end goal of a strong identity in a population is to achieve mentally stable and happy people. Conversely, a population with increasing rates of poor mental health is not developing in the right direction, and a population with a high and/or rising suicide rate is not fulfilling the identity needs of its population at large. Let us look at statistics for suicide first, since these are relatively unambiguous.

Table 14: Deaths by suicide in Norway 1931/35-1971/75

<u>Year</u>	<u>Number of cases reported</u>	<u>Suicides per million population*</u>
1931-1935	187	65
1936-1940	198	67
1941-1945	182	60
1946-1950	215	67
1951-1955	241	71
1956-1960	255	72
1961-1965	274	75
1966-1970	295	76
1971-1975	365	92
1975	395	99
1976	433	108

* calculated by the author

Data from Historical Statistics 1968 and Health Statistics 1975
+ Statistical Yearbook 1978

Table 14 does not split up suicides on sex because we did not find such figures after 1961/65. Up to this point, however, the frequency of suicide among men was 3-4 times that for women. Although it is hard to say something definite about the reliability of the data (some suicides may be recorded as death by illness), the Table indicates a consistent increase in the suicide rate after WW2.

The evaluation of trends in the population's mental health is a difficult task. Not only are comparable data often lacking, but society's perception of what constitutes a mental health problem may also vary. Nevertheless, Norwegian statistics on mental health are among the best developed in the Western world, and as such, we should have good possibilities of giving a picture of past and present mental health problems in this country. Failure to give a well-documented account of mental health in Norway, therefore, should not lead us to criticize official statistics at the present stage, but rather be blamed on the author's non-expert status in this field.

First, let us look at some aggregate figures, as shown in the table below.

Table 15: Mentally ill in mental hospitals, nursing homes and family care. Total number at the end of each year.

Year	Number of patients	Patients per 100 000 population*
1935	12,704	440
1940	14,393	484
1945	13,128	425
1950	14,249	436
1955	14,832	433
1960	17,150	479
1965	16,507	443
1970	15,168	391

Sources: Historical Statistics 1968 and Social Survey 1974

* calculated

Table 15 shows that the number of mentally ill in hospitals etc. has not increased relative to the population during the last few decades.

Table 16: 1950-1975 Beds and movement of patient population in mental hospitals

Year	Admissions			Per 100 000 popul.*			Dis- charged patients
	First admissions	Re- admissions	TOTAL	First	Readm.	TOTAL	
1950	1,571	1,253	2,824	48	38	86	2,445
1955	1,518	1,515	3,033	44	44	88	2,731
1960	2,173	2,544	4,717	61	71	132	4,406
1965	2,889	3,804	6,693	78	102	180	5,991
1970	2,948	4,418	7,366	76	114	190	6,829
1975	3,310	5,909	9,219	83	147	230	8,568

* calculated by the author

Source: NOS Mental Hospitals 1975

Table 16 above gives a somewhat different impression than Table 15 when it comes to the development of mental diseases after 1950. The mental hospitals had an average patient population of around 8,000 during the 1950-75 period (8500 in '65 and 7200 in '75), a number which has decreased since 1965. However, from Table 16 we see that the number of patients per 100 000 population almost doubled from 1950 to 1975 when it comes to first admissions to mental hospitals, while readmissions almost quadrupled in the same period. We also see that the number of patients being discharged during the period quadrupled in absolute number (tripled in relative numbers). In other words, more mental patients seem to have relapses (readmissions increasing strongly), and hospitals are used more "efficiently" (more patients processed with the same number of hospital beds).

The above data do not generally point to an increase in mental illness. This does not mean that the general mental health of the population is not getting worse. One indication that this actually may be the case is the increased use of psychopharmaca and antidepressives in hospitals, factors that may help to explain why people are being let out of hospitals sooner than before. But there also may be more cases of people with lighter types of mental problems, as indicated by Table 13. Here the data indicate that nervous conditions

are becoming more frequent among the population: Per 1,000 persons the 1968 survey reported a frequency of 62, while the 1975 survey gave a figure of 78 - a 25% increase. As we remember from Table 12, about 93% of the nervous conditions were reported to be chronic. Extrapolated on the total population this would mean that more than 315,000 people suffered from nervous conditions - a rather high number for a small country like Norway.

The Health Survey 1975 also includes questions concerning various psychological problems and the use of drugs (sedatives etc.). Of the respondents some 14% had at some point in their life been told by a doctor that they suffered from nervous or psychological problems (almost 11% of the males and 18% of the females). Slightly less than 7% of the respondents responded affirmatively to the question of whether they had experienced nervous or psychic problems during the 2-week survey period.

In total, more than 18% of all respondents had at some time used medicines or drugs for the nerves - 24% of all persons above the age of 16 had taken such cures, or almost 1/4 of the total adult population. During the survey period, more than 7% of the adult respondents had used drugs or medications for the nerves, a figure closely matching the reported number of people with a nervous condition.

Several studies on mental health problems in Norway seem to confirm a sad state of affairs when it comes to mental health. Nils Johan Lavik made a random sample study of 352 junior high school students in Oslo and 101 students in a small district in the countryside and classified 19,6% of the Oslo youth and 7,9% of the Skogdal youth as having a "poor mental health."⁴ Another study by Odd Steffen Dalgard and Tom Sprensen⁵ also shows the contrast between people's mental health in Oslo and a small rural municipality, indicating what identity may mean to mental stability: In Oslo 1003 people were interviewed, while in Marker Municipality 184 people were interviewed with the same methodology used. At the time of the interview, 8,6% of the Oslo sample stated that they suffered from 7 to 13 typical symptoms of psychiatric character, while the Marker sample tallied to 3,8%. The life figures for such symptoms were 14,8% for Oslo and 6% for Marker.

A leading authority in Norway on mental disease, Nils Rettersdøl, gives the following estimates of the Norwegian population's mental health.⁶

Approximately 1% of the population will develop schizophrenia,

6-7% suffer from psychoses,

10-20% suffer from neurosis, and

1/3 of the population will need psychiatric attention during their life-time.

About 36% of all patients in Norwegian hospitals are in psychiatric health institutions.

Although we have not been able to find long-term data on mental health, it is clear that a large minority of the Norwegian population is experiencing mental problems. We may guess that the recorded incidences of poor mental health only represent the tip of the iceberg. Probably most people are at some time or other depressed, are feeling insecure and lonely, are playing with the idea of committing suicide, or lack a sense of purpose in life. But many such cases will never be recorded as mental disturbances, and, probably, such feelings may be considered to be a normal part of our everyday life. But when only a few people appear to be happy or cheerful, when laughter in a public place is looked strangely upon, as it is in many places in Norway, then it becomes hard to call ourselves "developed".

Let us conclude from the above that Norwegians do not score very high on their identity needs, that we are becoming an alienated people with increasingly serious mental problems. But how are the next category of needs beings satisfied in this country, the FREEDOM needs? Do we have freedom of choice and different options in life, or are we predetermined and oppressed into a limited number of styles of life?

The subject of freedom is probably the most complicated among the four needs categories, and we shall therefore not focus too strongly on numerical indicators, but instead discuss the freedom needs concept itself. First, the concept of freedom to choose among alternatives is rather complicated. Some choices obviously count more than others,

and it is choices among matters that count we will strive for, not merely choices among things that are countable. Second, we may not always want to be able to choose among alternatives, or the number of alternatives may be so large as to be confusing rather than liberating on our actions. Not having complete consciousness of all possible choices will make us subject to manipulation by others for their own purposes. Third, choices we make may have implications for others which we are unable to perceive the consequences of, or even for ourselves. Therefore, if the structure of society is such that we cannot but choose what society offers, regardless of the consequences, do we have real freedom of choice?

Compared to many other countries, the objections raised above to the issue of real freedom may seem academic. Norwegians enjoy a great many freedoms which for others are totally out of reach: We may choose among a number of different channels for receiving and expressing information and opinion. Newspapers, periodicals, books, lay and professional magazines of nearly all kinds are freely available in most libraries throughout the country.⁷ In principle, one may read any book or other publication in any language - except on matters related to "national security." But since matters related to such issues are not in the conscious interest of more than a politicized minority, most Norwegians would consider our freedom in this area to be more or less complete. It is also true that people's freedom to communicate with each other has been greatly enhanced by the spread of the telephone... for those who have one. So far about half of the Norwegian households have access to a private telephone⁸, and business and public telephones bring the total number of telephones up to about 1 in every 3 persons.⁹ Compared with earlier years, the gain in telephone coverage is impressive - from 1 in 100 persons having one in 1900 to the present coverage represents a 33-fold density increase.¹⁰ International comparisons, however, are less flattering - the US, Sweden, Canada and Switzerland beat us by a factor of two in density,¹¹ by a factor of up to many times (cheaper)

when it comes to price. It is interesting to note how priorities are set in a country like Norway when it comes to installing new telephones. At present, only about 56,000 new telephones can be installed per year, while the 1977 sales figure for new cars totalled 145,000, bringing the people-to-private car ratio down to 3,9. In fact, more private citizens own cars than telephones, reflecting an almost total lack of public planning for a resource-scarce future. No limitations exist within or without the country when it comes to traveling-freedom is only limited by economics. In principle, Norwegians may freely engage in political or religious activities, they may choose their occupation, place to live and spouse, and the choice of almost any imaginable good is unrestricted. When it comes to choice of religion, options are in practice very limited, since 94% of the population is organized in the Lutheran state church of Norway by birth. The trend towards non-membership in the state church, however, is on the rise, giving hopes for more religious plurality in the future.¹² Also, alternatives to Lutheranism taught in Norwegian schools are slowly emerging. At present, however, there is a considerable amount of pressure being put on Norwegian children and adolescents by the schools and the state monopoly broadcasting system to adopt the majority's view of religion. Altogether, in terms of choice of way of life, the possibilities are definitely present in theory. In practice, however, it takes more than possibilities, it takes money, education and consciousness coupled with a strong non-conformist attitude to break out of the relatively conformist Norwegian way of life. But it is also possible that part of the Norwegian identity consists in doing basically what others are doing and that more diversity and freedom will lead to a lowered sense of identity, at least until an identity based on non-conformism has been developed and become conscious.

CONCLUSION

This paper has only been scratching the surface when it comes to indicating development trends in an overdeveloped country. We have been focussing on ends rather than on means, ie., on what overdevelopment means for people in terms of physical and mental health. In spite of the shortcomings of this brief paper, some conclusions may be drawn at this stage: First of all, in spite of the large leaps upwards on the material welfare-scale after WW2, people do not seem to be doing much better now than they did 2-3 decades ago. Violent deaths from accidents during the last century reached an all-time low around 1930-35, rose drastically during WW2 for then to drop again to another low point in 1951-55. After that, death rates from accidents have steadily increased. Homicides today are no more common than before, but again, there has been a steady increase after the 1951-55 period. Offences of violence against the person have shown a steady increase in frequency the last 2 decades. Probability of dying at most ages has stagnated since the 1950s, although infants still show significant gains. Females are outperforming males on this score, but very old people today compare poorly with older people even as far back as 100 years ago. Infant mortality rates are now only becoming marginally lower with most of the gain having been made 10 years ago. Expectation of life for males, excepting new-born babies, is stagnant since WW2, even going down for 30-year olds and beyond. Females are still improving marginally. Maternal deaths cannot possibly become much lower, and the rate was already insignificant in the early Fifties. Mortality from cardiovascular diseases has gone up steadily for males and females since 1931-35. As shown in Figure 1, the incidence of coronary heart disease and tooth fillings have followed closely the development of per capita sugar and

margarine consumption (as well as the level of industrialization and GNP growth) - being very low during the WW2 years and increasing steadily since then. Mortality from malignant neoplasms has followed the rise in heart diseases, and indications are that chronic diseases - now affecting over 40% of the population - has become steadily more prevalent. At the same time, suicide rates have gone up steadily since WW2 and an alarmingly high number of people suffer from various degrees of mental illness.

Altogether, it seems that life was better in Norway a few decades ago than today. This preliminary paper suggests that the figure illustrating the overdevelopment concept¹⁾ may give an indication of what has happened in our country. If we should put some dates on the curve, a suggestion would be to put 1930 at the beginning of the sufficiency level and 1970 at the beginning of overdevelopment, with around 1950-55 on top of the curve. As no wars are desirable, we suggest to exclude the war years from our "developed" period, indicating that Figure 1 not necessarily should be seen as indicating a one-way time scale. In other words, 1985 still has a chance of reaching the top of our curve, but possibly a new curve above the one we would visualize putting the 1950s on top. No doubt, the "meagre Thirties" would fall below our sufficiency level, at least for the bottom of society.

APPENDIX 1
Table: Death probability by age. Per 1000 population

Age	1871-1880	1891-1900	1911-1920	1931-1940	1951-1955	1956-1960	1961-1965	1966-1970	1974-75	1975-76
Males										
0	112,7	105,25	70,28	47,27	25,29	22,24	19,21	15,65	12,38	11,83
1	36,0	28,37	14,82	5,65	2,15	1,63	1,62	1,30	0,87	0,87
5	9,0	6,37	4,32	1,78	0,93	0,77	0,78	0,71	0,6	0,52
10	4,2	3,82	2,80	1,30	0,58	0,51	0,45	0,34	0,37	0,37
20	8,8	10,42	9,29	3,73	1,37	1,22	1,17	1,12	1,36	1,31
30	8,4	9,16	8,39	4,36	1,55	1,35	1,26	1,18	1,02	1,06
40	9,3	8,83	7,76	5,02	2,21	2,17	2,37	2,34	2,00	2,10
50	13,8	12,41	10,63	8,24	5,53	5,44	5,83	6,02	6,17	6,09
60	22,8	20,93	20,36	16,84	13,23	14,94	15,42	15,80	15,36	15,85
70	50,9	44,05	43,45	40,20	33,98	35,93	39,56	42,31	39,53	40,62
80	112,1	111,6	108,87	105,28	90,76	92,71	99,3	99,88	97,52	49,09
90	230,3	250,67	246,06	255,87	220,77	225,03	231,91	228,92	216,41	220,90
94	285,2	316,38	297,8	309,86	321,14	303,06	293,23	300,42	292,73	294,16

Age	1871-1880	1891-1900	1911-1920	1931-1940	1951-1955	1956-1960	1961-1965	1966-1970	1974-75	1975-76
Females										
00	95,5	86,83	57,05	36,68	19,87	17,28	14,97	12,03	8,95	9,59
11	34,7	26,41	13,58	5,24	1,98	1,33	1,16	1,05	0,64	0,61
55	8,9	6,42	3,94	1,35	0,58	0,49	0,43	0,39	0,32	0,34
10	4,3	3,85	2,75	1,02	0,31	0,26	0,26	0,18	0,22	0,18
20	5,7	6,02	6,48	2,53	0,47	0,35	0,31	0,37	0,37	0,37
30	7,7	7,46	7,25	3,28	0,88	0,62	0,53	0,48	0,45	0,48
40	9,4	9,01	7,39	3,87	1,62	1,42	1,32	1,25	1,17	1,12
50	11,1	10,42	9,51	6,76	3,94	3,31	3,09	3,17	2,85	2,95
60	19,9	17,79	16,55	13,61	9,14	8,71	8,29	7,93	7,05	7,22
70	44,6	39,8	38,44	34,21	26,87	27,04	26,75	24,55	20,56	20,34
80	106,4	102,12	97,81	95,67	84,44	83,65	85,53	77,51	71,12	70,34
90	215,8	219,86	220,74	231,89	215,43	217,49	218,69	200,73	195,83	195,60
94	257,8	274,89	293,94	291,87	300,32	299,73	296,75	263,87	263,12	260,76

Sources: Historical Statistics 1968 and Statistical Yearbooks 1972, 1977, p30 and 1978, p33

NOTES

1. Calculated by the author, see "Naturslukende storindustrie", Norsk Natur, No.5, 1977.
2. See lecture reproduced in Norsk Medisinaldepot, Yearly Report for 1976, on the 50-year history of medicines as experienced by himself.
3. A recent study on "Cancer care in Norway", June 14, 1978 from the Ministry of Social Affairs, predicts an average yearly increase in cancer incidence in Norway of 3%, rising from 307 in 1975 through 404 in 1985 to 484 per 100 000 in 1990. Half of the predicted increase is thought to be due to population changes.
4. See p.34 in Ungdoms mentale helse, University Press,Oslo 1976.
5. Mimeo, Institute of Psychiatry, University of Oslo, 1977.
6. Personal communication. For reference, see Rettersdøl : Menneskesinnet, Cappelen 1975, and Kriser i menneskesinnet, 1977.
7. In 1974, there were 1384 public libraries in Norway. Statistical Yearbook 1976.
8. Nordic Omnibus: "Nordic Research Statistics 1974", estimates that 48.6% of all households in 1974 had their own or access to private telephone, while 65.1% disposed of a private car.
9. At the end of 1974, there were 1 355 142 telephones in Norway. Statistical Yearbook 1976, p.221.
10. See Historical Statistics 1968, p.422
11. Arbeiderbladet, December 22 and 31, 1977 respectively.
12. Non-membership figures rose from 123.300 in 1950 to 135.000 in 1960 and leaped to 232.000 in 1970, according to public statistics.